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10/710,805	08/04/2004	Melanie S. Campbell	27475/06963	4804

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CALFEE HALTER & GRISWOLD, LLP
800 SUPERIOR AVENUE
SUITE 1400
CLEVELAND, OH 44114

EXAMINER
ABRAMOWITZ, HOWARD E

ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/710,805	CAMPBELL ET AL.	
	Examiner	Art Unit	
	Howard E. Abramowitz	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 August 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's amendments filed 11/4/05, have been fully considered and reviewed by the examiner. The examiner notes that claims 18, 19, 27, 28, 30, 39 and 42 have been amended. Currently claims 1-56 are pending. The applicant has not addressed the 112 2nd paragraph rejection on claim 19 regarding the use of trademarks or trade names and this rejection is maintained.

Response to Arguments

Applicant's arguments filed on 10/11/05 have been fully considered but they are not persuasive.

The applicant has argued against Blazey, Nielsen that the substrates in the prior art are not three-dimensional but rather two-dimensional substrates. The examiner argues that these substrates are in fact three dimensional as the have a length width and height, all the requirements of being three-dimensional. The applicant has stated that a three dimensional substrate is exemplified in figure 1. The examiner asserts that this is just an example and is not limiting as to what defines three-dimensional. The applicant also states in his argument that three-dimensional substrates are items that have edges, grooves, corners or other contoured or recessed areas in their surface. The examiner argues that all objects have edges and thus all objects are three-dimensional.

The applicant has argued that Schlegel does not teach the range as defined by the applicant as "thin films" (0.2-2 mils). The examiner argues that Schlegel does not put a hard limit onto the value of ranges used stating "about 3 and about 10 mils" (column 4 lines 13-15) the word about leaves this range open to values less than 3 mils. One of ordinary skill in the art would consider 2 mils to fall within the range of about 3 mils therefore the films of Schlegel are in the range of 0.2-2 mils. The applicant also argues that the films are not uniform as only the edges and corners are at that thickness creating a non-uniform thickness. The examiner asserts that Schlegel teaches that the entire coating is at that thickness and not just the edges and corners as is clearly stated in column 4 line 15 "edges and corners as well as in the field".

The applicant has argued Hasenour nowhere defines his films as being within the range of 0.2-2 mils. The examiner argues that while there is not a specific teaching Hasenour does teach that the films are to be thin enough to prevent a "plastic look" (paragraph 6) and to have a natural finish. This same statement is used by the applicant as a problem with the prior art and a goal of having thin films in the specified range, 0.2-2 mils, is to prevent this plastic appearance (page 2 of the specification). Accordingly, the applicant implies that in order to remove the plastic look the film thickness must be in the disclosed thin film range, since Hasenour is also creating thin films to prevent this plastic look the films of Hasenour must also fall in this range or else the plastic look would occur. Thus the films of Hasenour fall within the claimed ranges without the explicit teaching of the range.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 19 contains the trademark/trade name: SATA LP jet K3 HVLP Automatic high performance spray gun; and Can-Am #2100 RC Fluid Recirculation Automatic Spray Gun. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a high precision spray gun and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 7, 12-17, 46, 47, 51- 56 are rejected under 35 U.S.C. 102(b) as being anticipated by Blazey et al. (US Patent No. 6,231,931).

Referring to claim 1, Blazey et al. discloses a process for coating a three-dimensional substrate comprising: supplying a coating of 100% solid materials to the three-dimensional substrate, and applying the coating material to the substrate to provide a uniform thin film coating of said coated material on the substrate (column 2 lines 8-23, 28-40, 49-59).

Referring to claims 2 and 3, Blazey et al. discloses the film can be 0.2 mil (column 2 lines 49-59).

Referring to claim 4, Blazey discloses the film can be UV curable (column 2 lines 8-23).

Referring to claim 5, Blazey et al. discloses the substrate is comprised of wood (column 2 lines 8-23).

Referring to claim 7, Blazey discloses spray coating, which inherently involves atomizing the coating material to form an atomization stream (column 2 lines 49-59).

Referring to claim 12, Blazey et al. discloses applying a polymer coating to the substrate then curing the polymer with UV light (column 2 lines 28-40, column 3 lines 6-22). The pre-cured polymer can be considered the wet build and the cured polymer can

be considered the dry build. Since after curing the polymer will have a higher molecular weight, which will result in a higher viscosity (drying).

Referring to claim 13, since there is no solvent in the film to be driven off, the film thickness inherently will not change with the curing process.

Referring to claim 14, Blazey et al. discloses that multiple coatings can be applied (column 2 lines 28-40).

Referring to claim 15, Blazey et al discloses applying a sealer and a top coat (column 2 lines 41-48, column 3 lines 43-55).

Referring to claim 16, Blazey et al. discloses that the multiple coatings are applied in separate steps (column 2 lines 28-40).

Referring to claim 17, Blazey et al. discloses sanding the substrate (column 2 lines 28-40).

Referring to claims 46, 47, 51, 52, 54-56, Blazey et al. discloses all the limitations of these claims as discussed above.

Referring to claim 53, the term recyclable applies to any material that has the ability to be recycled. Any material sprayed onto the substrate has the ability of having the excess collected and reused thus all materials are recyclable. Furthermore, all chemical reactions are theoretically reversible so that any chemical reaction that occurs with the deposited material can theoretically be undone and the material can be reused.

Claims 1, 4, 5, 6, 53 and 56 are rejected under 35 U.S.C. 102(b) as being anticipated by Schlegel et al. (US Patent No. 6,268,022).

Referring to claims 1 and 56 Schlegel et al. discloses a process for coating a three-dimensional substrate comprising supplying a coating material comprised of a powder coating (that is solvent free) applying the coating material to the substrate to provide a uniform thin film coating on the substrate (column 1 lines 3-9).

Referring to claim 4, Schlegel et al. discloses that the coating can be UV curable (column 4 lines 64-67).

Referring to claims 5 and 6, Schlegel et al. discloses that the substrate can be a wooden cabinet component (column 3 lines 9-20, column 1 lines 3-9).

Referring to claim 53, Schlegel et al. discloses a process for coating a three dimensional substrate by applying a coating material on the substrate in a uniform thin film (column 1 lines 3-9). Any material sprayed onto the substrate has the ability of having the excess collected and reused thus all materials are recyclable. Furthermore, all chemical reactions are theoretically reversible so that any chemical reaction that occurs with the deposited material can theoretically be undone and the material can be reused.

Claims 1-5, 7-13, 18, 20-22, 28, 32-35, 39-44, 46, 47, 49, 51-56 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nielsen (US Patent No. 5,989,638).

Referring to claim 1, Nielsen discloses a method for coating a substrate, while it does not specifically disclose a three dimensional substrate, all substrates are inherently three dimensional (column 16 lines 57-63). The coating material is a high

solids content material of 78.70 weight percent solids (column 25 lines 25-27). This can be interpreted to be a "substantially solvent free" material and thus would fit the definition on page 4 of the specification for a 100% solvent material. Therefore Nielsen discloses a method for applying a 100% solids material to a three-dimensional substrate forming a thin uniform film (column 17 lines 16-26).

Alternatively, the example given in the Nielsen is 1.30% less than the "twenty percent or less solvent" which is defined in the specification as 100% solids (page 4). However, the instant invention of Nielsen is not bound by this weight percent of 78.70 but rather "high solids content" materials. The value given is only an exemplification and it would have been obvious to one of ordinary skill in the art at the time the invention was made that the Nielsen invention can function at higher weight percentages including 80% solids and greater. This is desirable as the higher weight percentage of solids decreases the amount of solvent and air toxics that need to be evaporated off into the atmosphere (column 6 lines 38-50).

Referring to claims 2 and 3, Nielsen discloses forming a thin film with a thickness of 0.2 mils (column 17 lines 16-26).

Referring to claim 4, Nielsen discloses the coating material is UV curable (column 17 lines 56-61).

Referring to claim 5, Nielsen discloses the substrate can be comprised of wood (column 16 lines 57-63).

Referring to claim 7, Nielsen discloses a spray coating process, which acts to atomize the liquid coating material column 1 lines 52-65).

Referring to claim 8, Nielsen discloses the atomization stream is temperature controlled (column 19 lines 45-57).

Refefring to claims 9 and 10, Nielsen discloses the stream is at 140 °F (column 19 lines 45-57).

Referring to claim 11, Nielsen discloses the average particle size is from 15-50 microns (column 17 lines 1-6)

Referring to claim 12, Nielsen discloses that the coating material forms a wet film and is cured to form a dry film (column 17 lines 16-26, lines 57-61).

Referring to claim 13, Nielsen discloses that the wet film and dry film are substantially equal in thickness (column 26 lines 60-65).

Referring to claim 18, Nielsen discloses a method using spray gun that produced droplets with a mean diameter of 25 microns (column 25 lines 49-61).

Referring to claims 20-22 Nielsen discloses adding heat to the coating material heating it to 140°F (column 19 lines 46-57).

Referring to claim 28, Nielsen discloses measuring the temperature of the discharge stream from a spray gun (column 25 lines 49-61).

Referring to claim 32, Nielsen discloses that the substrate is moving along a conveyor to enter and leave the application region (column 34, lines 5-35).

Referring to claims 33, 34 and 35 Nielsen discloses that the substrate is coated in a chamber, a cabinet that contains an applicator, a reciprocating automatic spray gun (column 34 lines 5-35).

Referring to claim 39, Nielsen discloses controlling the particles size to between

15 and 50 microns and discloses controlling the pressure of the carbon dioxide used to flow the material (column 17 lines 1-6, column 19 lines 46-57). Controlling the pressure inherently controls the velocity of the particles. Thus controlling the particle size and the particle velocity inherently controls the particles momentum.

Referring to claim 40, Nielsen discloses a process for applying a 100% solids material atomizing the material and heating it to 140 °F as described above.

Referring to claim 41, the atomization is provided by spray guns (column 34 lines 5-35).

Referring to claim 42, Nielsen discloses the temperature of the atomized spray is known, therefor a temperature sensor must have been used to measure the temperature of the atomized coating material (column 25 lines 49-61).

Referring to claim 43, Nielsen discloses that the mixture is heated prior to spraying in order to maintain the spray temperature at the desired value (column 25 lines 49-61).

Referring to claim 44, all substrates are three-dimensional.

Referring to claim 46, Nielsen discloses a process for coating a three-dimensional substrate to form a uniform wet build drying the uniform wet build to form a uniform dry build (column 34 lines 5-35). As discussed above the film thickness can be less than 0.001 inches and can be substantially equal.

Referring to claim 47, Nielsen discloses the coating material can be 100% solids material as discussed above.

Referring to claim 49, Nielsen discloses a process for coating a three-

dimensional substrate by atomizing a 100 % solids material using a spray gun and depositing the spray onto the substrate measuring the temperature of the spray and controlling it to 140 ºF as discussed above. The temperature of the coating material is controlled in order to maintain the temperature of the spray at the desired temperature, while this is not stated it is inherently necessary to do so in order to control the temperature of the spray.

Referring to claim 51, 52, 54-56 all aspects of these claims have been shown above.

Referring to claim 53, Nielsen discloses a process for coating a three dimensional substrate by applying a coating material on the substrate that is less than 25% solvent in a uniform thin film (column 17 lines 16-26, column 25 lines 25-27). Any material sprayed onto the substrate has the ability of having the excess collected and reused thus all materials are recyclable. Furthermore, all chemical reactions are theoretically reversible so that any chemical reaction that occurs with the deposited material can theoretically be undone and the material can be reused.

Claims 46 and 51-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Nielsen.

Referring to claim 46, Nielsen discloses a process for coating a three-dimensional substrate to form a uniform wet build drying the uniform wet build to form a uniform dry build (column 34 lines 5-35). As discussed above the film thickness can be less than 0.001 inches and can be substantially equal.

Referring to claim 51, 52, 54 Nielsen discloses supplying a material to one or more spray guns atomizing the coating material, applying the atomized coating material to a three-dimensional substrate to form a uniform wet build of coating material which is cured to form a uniform dry build of coating material each 0.001 inches or less (column 17 lines 16-26, column 34 lines 5-35).

Referring to claim 53, Nielsen discloses a process for coating a three dimensional substrate by applying a coating material on the substrate that is less than 25% solvent in a uniform thin film (column 17 lines 16-26, column 25 lines 25-27). Any material sprayed onto the substrate has the ability of having the excess collected and reused thus all materials are recyclable. Furthermore, all chemical reactions are theoretically reversible so that any chemical reaction that occurs with the deposited material can theoretically be undone and the material can be reused.

Referring to claim 55, Nielsen discloses the films are substantially the same thickness when wet and when dry (column 26 lines 60-65).

Referring to claim 56, Nielsen discloses a process for coating a material that is less than 25% solvent and applying that coating material to a three dimensional substrate to form a uniform thin film coating on the substrate as discussed above.

Claims 1, 4-7, 12, 13, 32-35, 52, 53, 56 are rejected under 35 U.S.C. 102(e) as being anticipated by Hasenour et al. (US Patent Application Publication No. 2003/0183166).

Referring to claim 1, Hasenour et al. discloses coating a three dimensional

substrate using a coating material comprised of 100% solids material , applying the coating to a three-dimensional substrate to provide a uniform thin film coating of the coating material on the three-dimensional substrate (paragraph 11, paragraph 37)

Referring to claim 4, Hasenour et al. discloses the coating material can be UV curable (paragraph 6).

Referring to claims 5 and 6, Hasenour et al. discloses the substrate can be a wooden cabinet door (paragraphs 5 and 6).

Referring to claim 7, Hasenour et al. discloses spraying the coating using air assisted spray gun inherently atomizes the material (paragraph 34).

Referring to claim 12, Hasenour et al. discloses the 100% solids material is applied then cured using UV light (paragraph 5).

Referring to claim 13, Hasenour et al. discloses that the wet and dry coatings are the same thickness (paragraph 6).

Referring to claims 32, 33, 34 and 35, Hasenour et al. discloses the substrate is moved in and out of the spray chamber on a conveyor belt (paragraph 31. The spray chamber is located within an applicator (paragraph 16).

Referring to claim 52, Hasenour et al. discloses applying a solvent material that is substantially solvent-free to a thee-dimensional substrate and forming a uniform thin film on the three-dimensional substrate (paragraphs 5, 6, 11).

Referring to claim 53, Hasenour et al. discloses applying a solvent material that is substantially solvent-free to a thee-dimensional substrate and forming a uniform thin film on the three-dimensional substrate wherein the coating material is recyclable

(paragraphs 5, 6, 11 and 35)

Referring to claim 56, Hasenour et al. discloses applying a solvent material that is 25% or less solvent to a thee-dimensional substrate and forming a uniform thin film on the three-dimensional substrate (paragraphs 5, 6, 11).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen as applied to claims 1-5, 7-13, 18, 20-22, 28, 32-35, 39-44, 46, 47, 49, 51-56 above, and further in view of Cueller et al. (US Patent No. 5,669,974).

Referring to claim 37, Nielsen discloses all of the features of the claim except it does not disclose heating the substrate prior to applying the coating. However, Cueller et al. teaches that heating the substrate to 110-145 °F prior to applying the coating helps prevent crinkling if the pad is too hot and or dripping if the pad is too cool (column 7 lines 8-44). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nielsen to include heating the substrate as suggested by Cueller et al. with an expectation of preventing crinkling and dripping of the coating.

Claims 45, 48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen as applied to claims 1-5, 7-13, 18, 20-22, 28, 32-35, 39-44, 46, 47, 49, 51-56 above, and further in view of Hasenour et al..

Nielsen discloses all the features of claims 45, 48 and 50 except it does not disclose applying the treatment to wooden cabinet doors. However, Hasenour teaches that it is desirable to coat 100% solids materials onto wooden cabinet doors. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nielsen to apply the 100 % solids coating to wooden cabinet doors as suggested by Hasenour with a reasonable expectation of success.

Claims 29-31 rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen as applied to claims 1-5, 7-13, 18, 20-22, 28, 32-35, 39-44, 46, 47, 49, 51-56 above, and further in view of Myers et al. (US Patent No. 5,290,598).

Referring to claim 29-31, Nielsen discloses all of the features of claim 29 but does not disclose measuring the temperature in regular intervals or adjusting the temperature of the input streams to maintain the discharge temperature between 80 and 160 ºF. However, Myers et al. teaches that when spray coating high solids materials onto wooden substrates it is desirable to control the temperature of the spray, if the temperature of the spray is too hot the coating will sag and if it is too cool the material will not vaporize properly the proper temperature should be between 65 and 150 ºF (column 5 lines 18-29). Accordingly it would have been obvious to one of ordinary skill

in the art at the time the invention was made to monitor the temperature of the spray at regular intervals and to adjust the temperature of the input streams to ensure a temperature of between 65 and 150 °F is maintained as suggested by Myers et al. with an expectation of forming a high quality coating that doesn't sag and that was formed by a well atomized spray.

Claims 23, 24, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blazey et al in view of Brown (US Patent No. 6,306,952) in view of Hynds (US Patent No. 5,478,014).

Referring to claims 23 and 24, Blazey et al discloses using a spray coating method to apply a coating of 109% solids materials as discussed above however it gives no details into the coating process. Brown teaches that when applying coatings of materials in which it is desirable to limit the amount of volatile organic solvents High volume low pressure spray systems are a conventional way to do so (column 1 lines 34-39). Hynds teaches that when using a HVLP spray system there is a pressurized air stream (column 3 lines 10-16). Hynds also teaches it is beneficial to heat the air stream in order to quicken the drying time and atomize the material (column 1 lines 7-13). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Blazey et al. to use a high volume low pressure spray system as suggested by Brown and to heat the air stream in order to dissolve the solvent (which may be present in 100% solids materials page 4 specification) and help atomize the material as suggested by Hynds.

Referring to claims 26 and 27, the heat is supplied from as external source that is a component of the spray gun (column 6 lines 37-50).

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blazey et al. in view of Brown in view of Hynds as applied to claims 23, 24, 26 and 27 above, and further in view of Nielsen. Blazey et al. in view of Brown in view of Hynds disclose all of the features of claim 25 but do not give the temperature of the heated gas in a range between 80 and 160 °F. However, Nielsen teaches that when applying a coating of high solids content material it is desirable to have the temperature at 140 °F. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Blazey et al. in view of Brown in view of Hynds to heat, the gas to a temperature of 140 °F as suggested by Nielsen with a reasonable expectation of successfully coating the material onto a substrate.

Claims 36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen in view of Cueller et al. as applied to claim 37 above, and further in view of Fannon (US Patent Application Publication 2002/0033134).

Referring to claim 38, Nielsen in view of Cueller et al. teaches all the features of claim 38 except they do not teach to heat the substrate with infrared heaters. However, Fannon teaches that applying infrared heat to the substrate helps increase the efficiency of the processing coatings on wooden substrates (paragraphs 1 and 12). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Nielsen in view of Cueller et al. to include infrared heating of the substrate as suggested by Fannon with an expectation of increasing the efficiency of the processing coating.

Referring to claim 36, since it is desirable to heat the substrate and the spray to a temperature of approximately 140 ºF as discussed above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to heat the chamber to approximately the same temperature to prevent either the substrate or the spray from cooling down prior to or during the coating process. The disadvantages of having the substrate and the spray temperatures deviate from the desired values have been expressed above and it would be obvious to heat the chamber to the desired temperature to remove any temperature gradient driving force that could possibly result in poor coating of the material onto the substrate.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Howard E. Abramowitz whose telephone number is 571-272-8557. The examiner can normally be reached on monday-friday 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HEA

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TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER